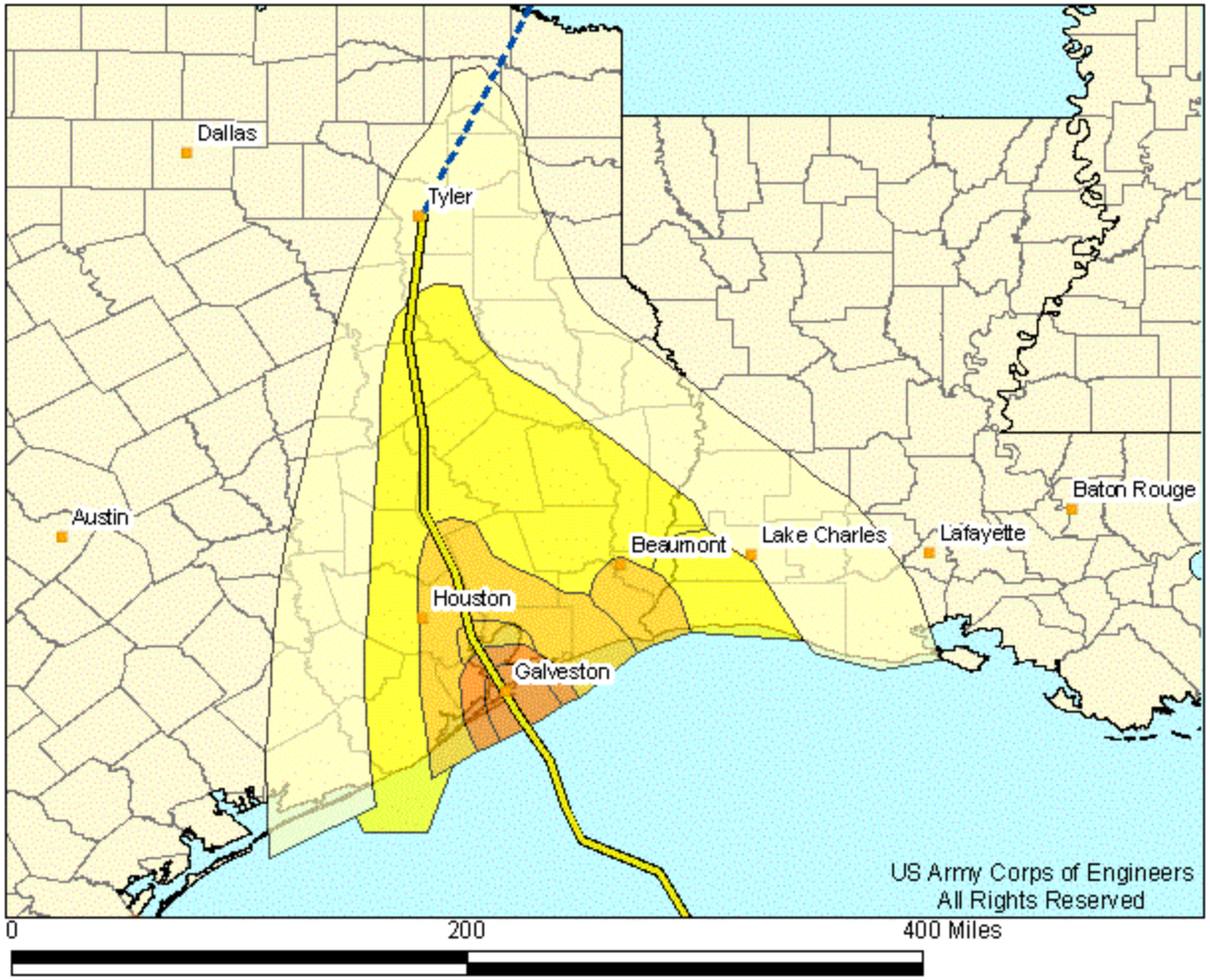
US Army Corps of Engineers

# Hurricane Ike Projected Damage Areas

## Landfall Plus About 16 Hours

**For Planning Purposes Only!**




### *Post Landfall Projected Damage Areas*

This model is based on a Category 3 storm making landfall near Galveston, TX.

Forecast Track
Historic Track

**Projected Damage Areas**

- CAT 0-type damage
- CAT 1-type damage
- CAT 2-type damage
- CAT 3-type damage
- CAT 4-type damage
- CAT 5-type damage

Information provided on this page displays a Category 3 storm making landfall near Galveston, TX. These projections are based on information from the NHC (1700 EDT 09/13/2008) forecast.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

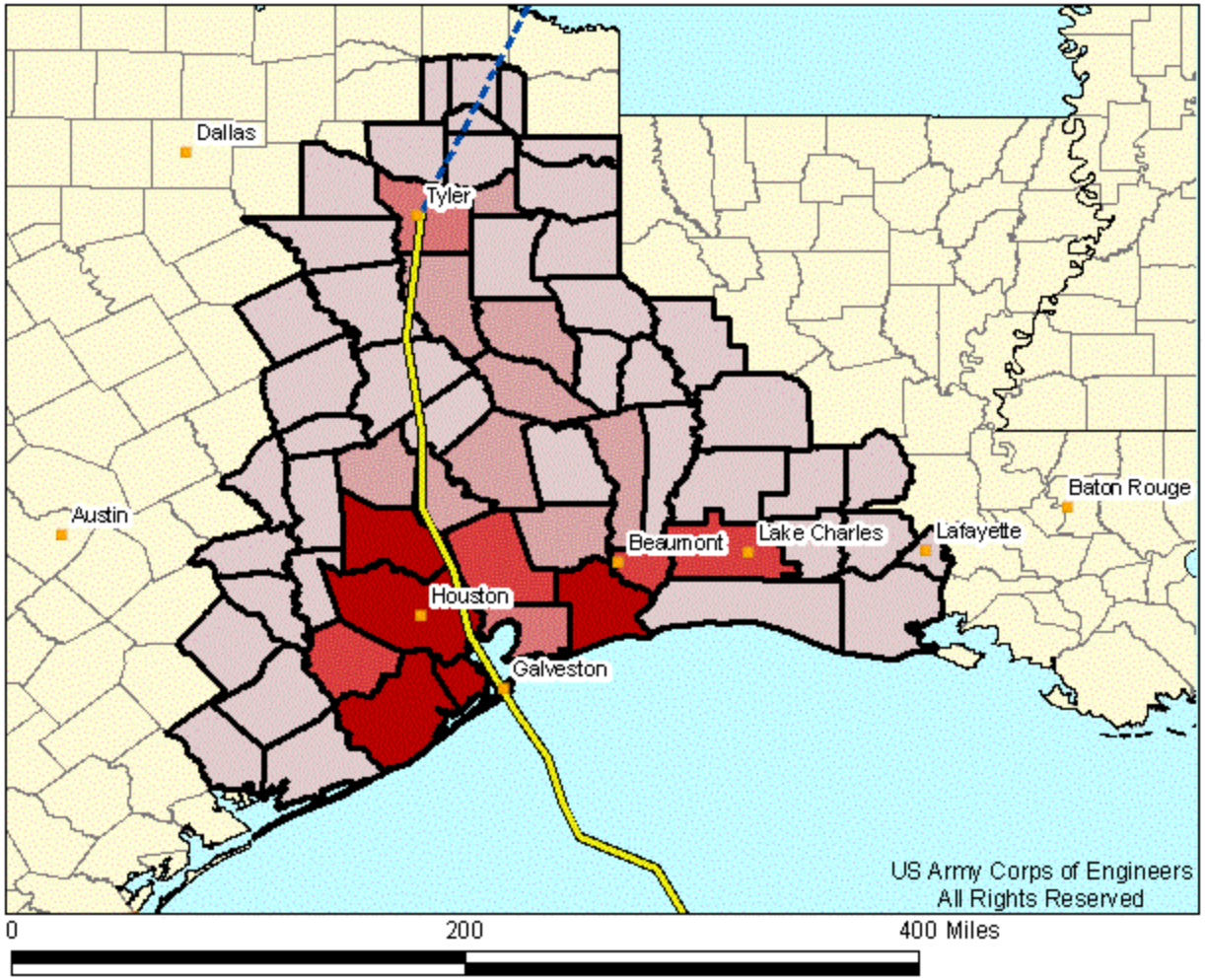
| Hurricane Ike Projected Damage Areas | |
|---|---|
| **Generated By:** Siemsen/Deatrick, LRL 1900 EDT 09/13/2008 | |
| **Sources:** HURREVAC LRL-DEBRIS | Page 1 of 14 |

US Army Corps of Engineers

# Hurricane Ike Debris Model

## Landfall Plus About **16** Hours

**For Planning Purposes Only!**




### *Post Landfall Debris Model Results*

Texas - 36,229,000 Yards
Louisiana - 888,000 Yards

*Model results per County on following page*

This model is based on a Category 3 storm making landfall near Galveston, TX.

Forecast Track
Historic Track

**Debris**

- < 100,000 cubic yards
- 100,000 - 249,999 cubic yards
- 250,000 - 499,999 cubic yards
- 500,000 - 999,999 cubic yards
- >1,000,000 cubic yards

Information provided on this page displays a Category 3 storm making landfall near Galveston, TX. These projections are based on information from the NHC (1700 EDT 09/13/2008) forecast. The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds, but does not include volume that may be covered by private insurance. Debris volume may include storm surge generated debris.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

| Hurricane Ike Debris Model | |
|---|---|
| **Generated By:** Siemsen/Deatrick, LRL 1900 EDT 09/13/2008 | |
| **Sources:** HURREVAC LRL-DEBRIS | Page 2 of 14 |

US Army Corps of Engineers

# Hurricane Ike Debris Model

## Landfall Plus About 16 Hours

**For Planning Purposes Only!**

| State | Yards per State | County | Yards per County |
|---|---|---|---|
| Louisiana | | Acadia | 39,000 |
| | | Allen | 18,000 |
| | | Beauregard | 62,000 |
| | | Calcasieu | 603,000 |
| | | Cameron | 62,000 |
| | | Evangeline | 2,000 |
| | | Jefferson Davis | 46,000 |
| | | Lafayette | < 1,000 |
| | | Sabine | 2,000 |
| | | Vermilion | 35,000 |
| | | Vernon | 19,000 |
| Louisiana | 888,000 | | |
| | | | |
| Texas | | Anderson | 70,000 |
| | | Angelina | 207,000 |
| | | Austin | 25,000 |
| | | Brazoria | 1,516,000 |
| | | Brazos | < 1,000 |
| | | Camp | 13,000 |
| | | Chambers | 424,000 |
| | | Cherokee | 110,000 |
| | | Colorado | 2,000 |
| | | Fort Bend | 936,000 |
| | | Franklin | 3,000 |
| | | Freestone | < 1,000 |
| | | Galveston | 5,889,000 |
| | | Gregg | 158,000 |
| | | Grimes | 43,000 |
| | | Hardin | 169,000 |
| | | Harris | 18,550,000 |
| | | Harrison | 14,000 |

| State | Yards per State | County | Yards per County |
|---|---|---|---|
| Texas | | Henderson | 24,000 |
| (continued) | | Houston | 90,000 |
| | | Jackson | < 1,000 |
| | | Jasper | 106,000 |
| | | Jefferson | 3,569,000 |
| | | Leon | 17,000 |
| | | Liberty | 681,000 |
| | | Madison | 12,000 |
| | | Marion | < 1,000 |
| | | Matagorda | 68,000 |
| | | Montgomery | 1,481,000 |
| | | Morris | 6,000 |
| | | Nacogdoches | 101,000 |
| | | Newton | 54,000 |
| | | Orange | 655,000 |
| | | Panola | 9,000 |
| | | Polk | 171,000 |
| | | Rusk | 79,000 |
| | | Sabine | 19,000 |
| | | San Augustine | 19,000 |
| | | San Jacinto | 111,000 |
| | | Shelby | 13,000 |
| | | Smith | 281,000 |
| | | Titus | 28,000 |
| | | Trinity | 67,000 |
| | | Tyler | 97,000 |
| | | Upshur | 49,000 |
| | | Van Zandt | 3,000 |
| | | Walker | 153,000 |

The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds, but does not include volume that may be covered by private insurance. Debris volume may include storm surge generated debris.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Source: US Army Corps of Engineers, All Rights Reserved

**Hurricane Ike Debris Model**

**Generated By:**
Siemsen/Deatrick, LRL 1900 EDT 09/13/2008

**Sources:**
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

# Hurricane Ike Debris Model

## Landfall Plus About **16** Hours

**For Planning Purposes Only!**

| State | Yards per State | County | Yards per County |
|---|---|---|---|
| Texas | | Waller | 47,000 |
| (continued) | | Washington | 4,000 |
| | | Wharton | 57,000 |
| | | Wood | 29,000 |
| Texas | 36,229,000 | | |

The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds, but does not include volume that may be covered by private insurance. Debris volume may include storm surge generated debris.

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**Hurricane Ike Debris Model**

**Generated By:**
Siemsen/Deatrick, LRL 1900 EDT 09/13/2008

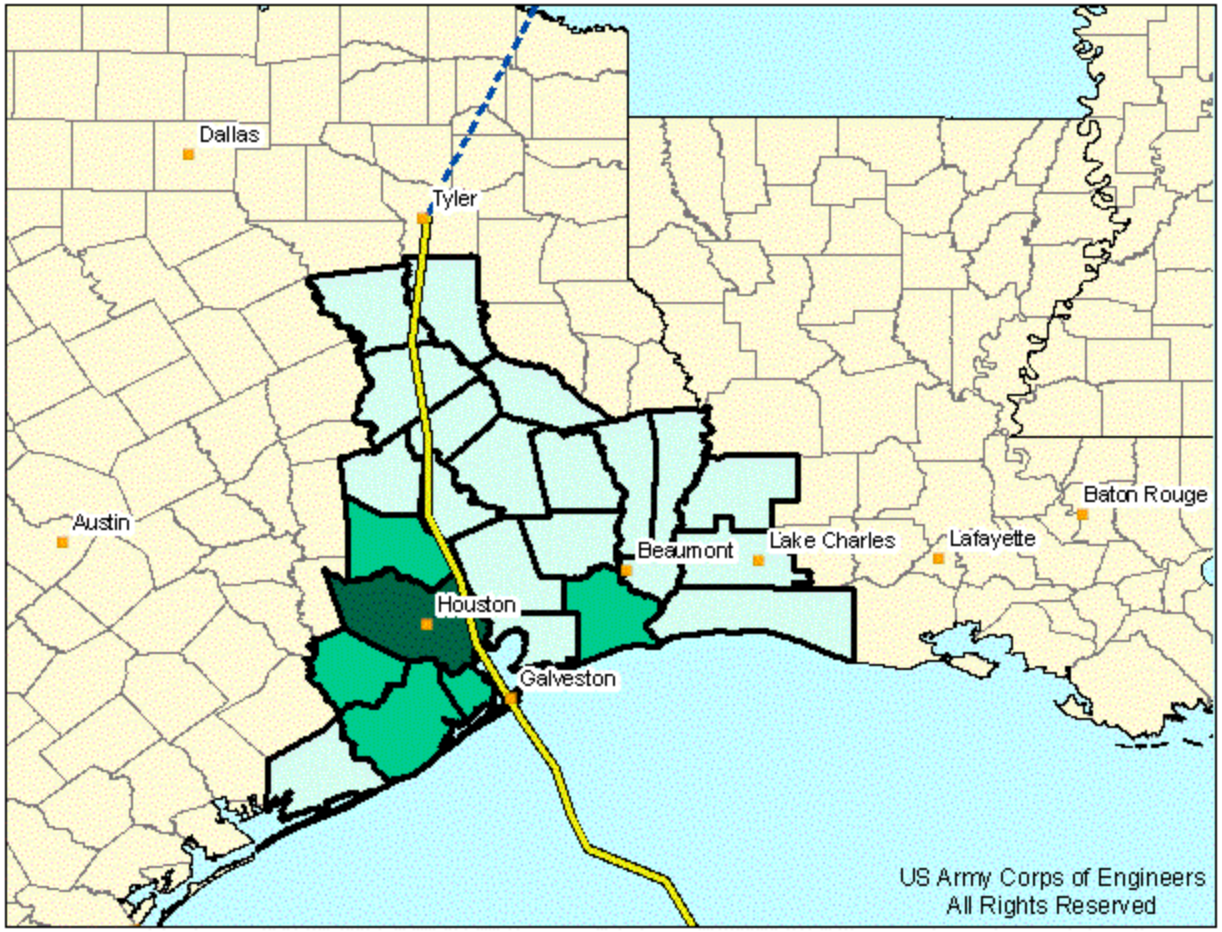
**Sources:**
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

# Hurricane Ike Commodities Model

## Landfall Plus About **16** Hours

**For Planning Purposes Only!**




### *Post Landfall Water Model Results*

**Day One / Day Two / Day Three**
Texas – 63/126/252 Truckloads
Louisiana – 6/6/6 Truckloads

*Model results per County on following page*

This model is based on a Category 3 storm making landfall near Galveston, TX.

Forecast Track
Historic Track

**Commodities**

- < 5 Trucks Each
- 5 - 10 Trucks Each
- 11 - 20 Trucks Each
- 21 - 40 Trucks Each
- > 40 Trucks Each

Information provided on this page displays a Category 3 storm making landfall near Galveston, TX. These projections are based on information from the NHC ***(1700 EDT 09/13/2008)*** forecast. The amount of commodities forecasted is based on Mission Guide Book requirements and SME input. The graphic represents single day needs with full distribution system in place and operating.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

| Hurricane Ike Commodities Model | |
|---|---|
| **Generated By:** Siemsen/Deatrick, LRL 1900 EDT 09/13/2008 | |
| **Sources:** HURREVAC LRL-DEBRIS | Page 5 of 14 |

US Army Corps of Engineers

# Hurricane Ike Commodities Model

## Landfall Plus About 16 Hours

**For Planning Purposes Only!**

| State | Truckloads per State | County | Truckloads per County |
|---|---|---|---|
| Louisiana | | Beauregard | 1 |
| | | Calcasieu | 4 |
| | | Cameron | 1 |
| Louisiana | 6 | | |
| | | | |
| Texas | | Anderson | 1 |
| | | Angelina | 3 |
| | | Brazoria | 12 |
| | | Chambers | 2 |
| | | Cherokee | 1 |
| | | Fort Bend | 15 |
| | | Galveston | 12 |
| | | Hardin | 3 |
| | | Harris | 156 |
| | | Houston | 1 |
| | | Jasper | 1 |
| | | Jefferson | 11 |
| | | Liberty | 4 |
| | | Matagorda | 1 |
| | | Montgomery | 15 |
| | | Newton | 1 |
| | | Orange | 4 |
| | | Polk | 2 |
| | | San Jacinto | 2 |
| | | Trinity | 1 |
| | | Tyler | 1 |
| | | Walker | 3 |
| Texas | 252 | | |

The amount of commodities forecasted is based on Mission Guide Book requirements and SME input and the above table indicates suggested needs based on phased deployment of a commodities distribution system.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

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**Hurricane Ike Commodities Model**

**Generated By:**
Siemsen/Deatrick, LRL 1900 EDT 09/13/2008

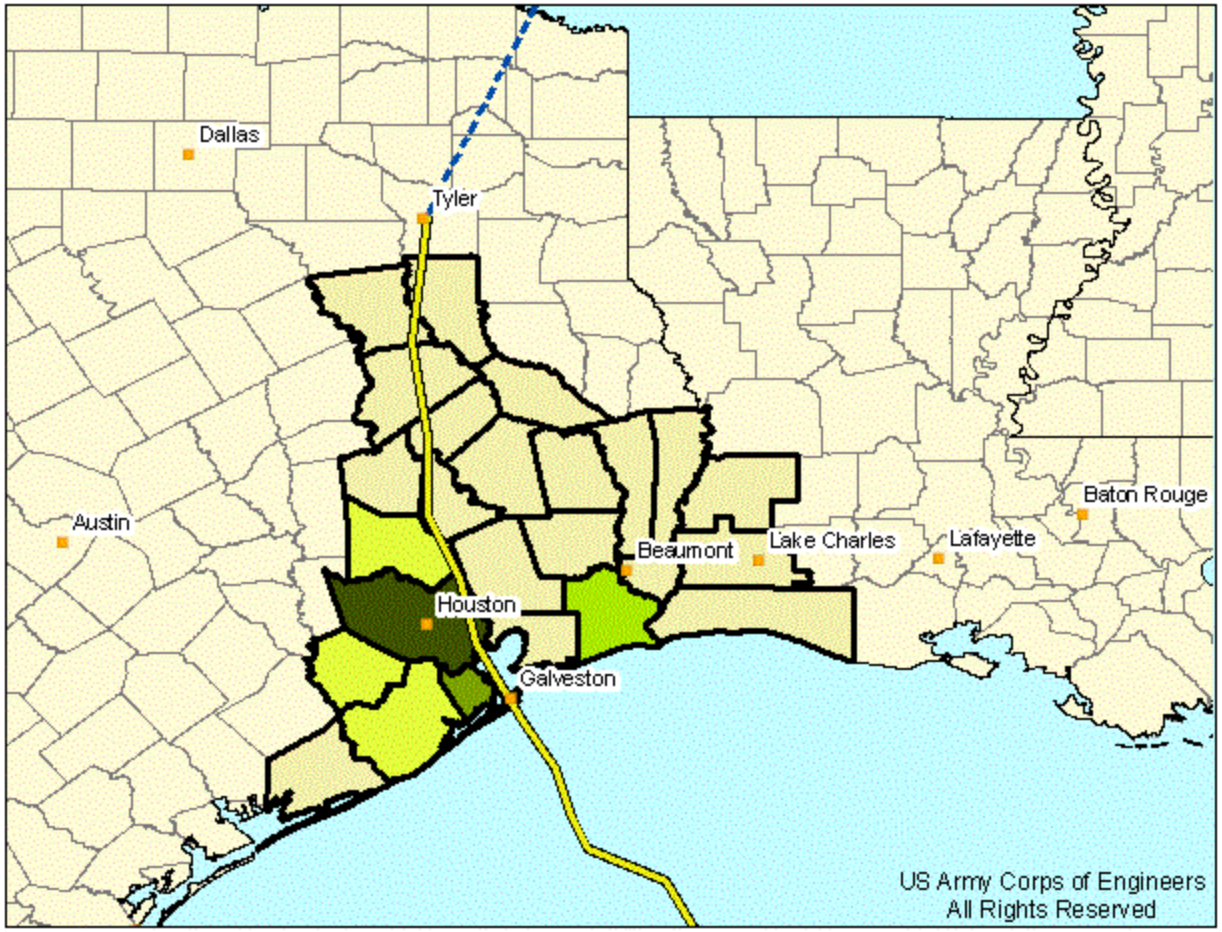
**Sources:**
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

# Hurricane Ike Temporary Roofing Model

## Landfall Plus About 16 Hours

**For Planning Purposes Only!**




### *Post Landfall Temporary Roofing Model Results*

Texas - 65,200
Louisiana - 600

*Model results per County on following page*

This model is based on a Category 3 storm making landfall near Galveston, TX.

Forecast Track
Historic Track

**Temporary Roofing**

- < 2,000 units
- 2,000 - 3,999 units
- 4,000 - 5,999 units
- 6,000 - 9,999 units
- > 10,000 units

Information provided on this page displays a Category 3 storm making landfall near Galveston, TX. These projections are based on information from the NHC (1700 EDT 09/13/2008) forecast. Temporary roofing is based on 2% in CAT 1, 5% in CAT 2 and 7% in CAT 3.

Details about this model may be obtained at http://www.englinkusace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

| Hurricane Ike Roofing Model | |
|---|---|
| **Generated By:** Siemsen/Deatrick, LRL 1900 EDT 09/13/2008 | |
| **Sources:** HURREVAC LRL-DEBRIS | Page 7 of 14 |

US Army Corps of Engineers

# Hurricane Ike Temporary Roofing Model

## Landfall Plus About **16** Hours

**For Planning Purposes Only!**

| State | House Units per State | County | House Units per County |
|---|---|---|---|
| Louisiana | | Beauregard | < 100 |
| | | Calcasieu | 600 |
| | | Cameron | < 100 |
| Louisiana | 600 | | |
| | | | |
| Texas | | Anderson | < 100 |
| | | Angelina | 500 |
| | | Brazoria | 2,900 |
| | | Chambers | 600 |
| | | Cherokee | 200 |
| | | Fort Bend | 2,200 |
| | | Galveston | 6,800 |
| | | Hardin | 400 |
| | | Harris | 39,700 |
| | | Houston | 200 |
| | | Jasper | 200 |
| | | Jefferson | 4,300 |
| | | Liberty | 1,200 |
| | | Matagorda | < 100 |
| | | Montgomery | 3,400 |
| | | Newton | < 100 |
| | | Orange | 1,100 |
| | | Polk | 400 |
| | | San Jacinto | 300 |
| | | Trinity | 200 |
| | | Tyler | 200 |
| | | Walker | 400 |
| Texas | 65,200 | | |

Temporary roofing is based on 2% in CAT 1, 5% in CAT 2 and 7% in CAT 3.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

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**Hurricane Ike Roofing Model**

**Generated By:**
Siemsen/Deatrick, LRL 1900 EDT 09/13/2008

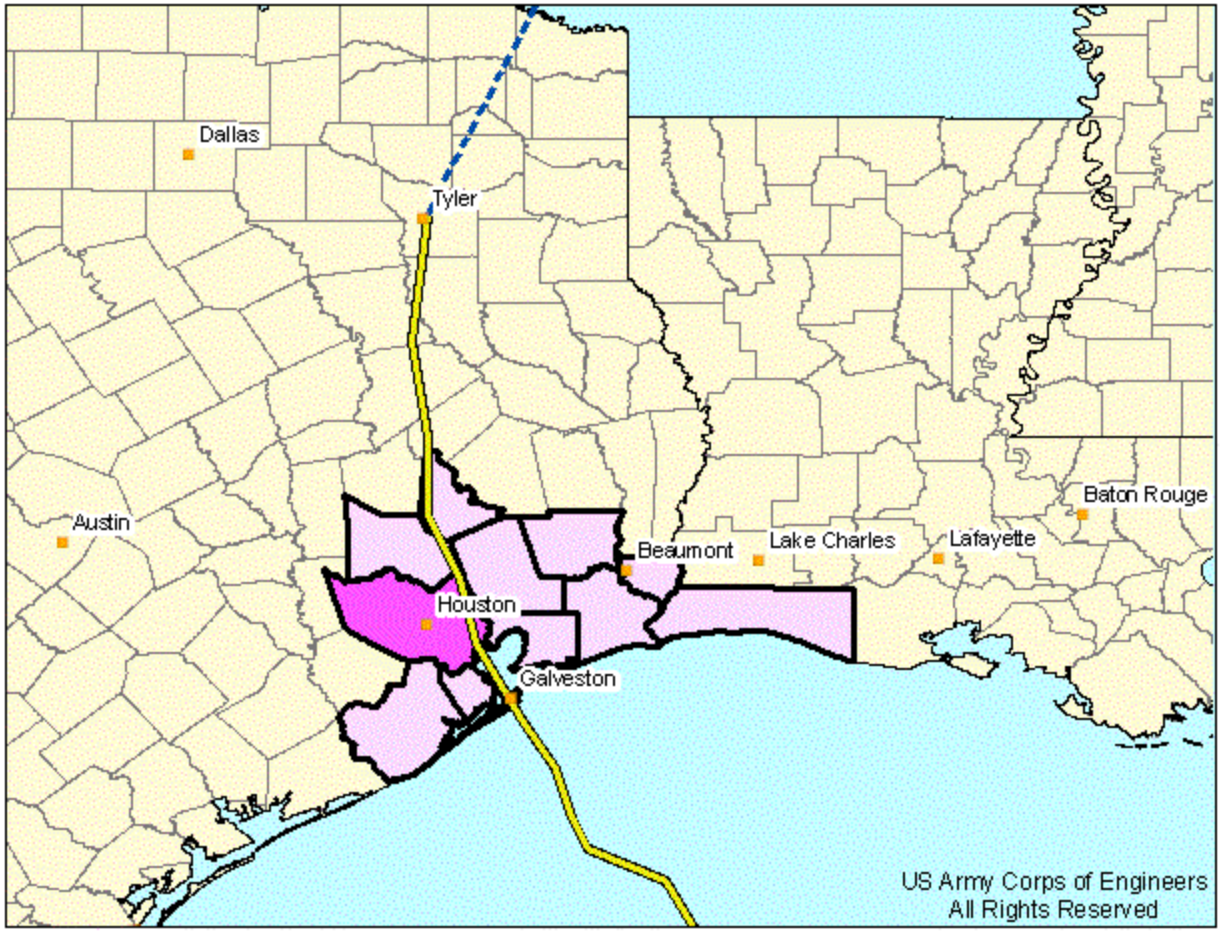
**Sources:**
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

# Hurricane Ike Temporary Housing Model

## Landfall Plus About 16 Hours

**For Planning Purposes Only!**




### *Post Landfall Temporary Housing Model Results*

Texas - 8,500

*Model results per County on following page*

This model is based on a Category 3 storm making landfall near Galveston, TX.

Forecast Track
Historic Track

**Temporary Housing**

- < 2,000 units
- 2,000 - 3,999 units
- 4,000 - 5,999 units
- 6,000 - 9,999 units
- > 10,000 units

Information provided on this page displays a Category 3 storm making landfall near Galveston, TX. These projections are based on information from the NHC (1700 EDT 09/13/2008) forecast. Temporary housing is based on 1% in CAT 2 and 2% in CAT 3.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

| Hurricane Ike Housing Model | |
|---|---|
| **Generated By:** Siemsen/Deatrick, LRL 1900 EDT 09/13/2008 | |
| **Sources:** HURREVAC LRL-DEBRIS | Page 9 of 14 |

US Army Corps of Engineers

# Hurricane Ike Temporary Housing Model

## Landfall Plus About 16 Hours

**For Planning Purposes Only!**

| State | House Units per State | County | House Units per County |
|---|---|---|---|
| Louisiana | | Cameron | < 100 |
| Louisiana | | | |
| | | | |
| Texas | | Brazoria | 400 |
| | | Chambers | 200 |
| | | Galveston | 1,800 |
| | | Hardin | < 100 |
| | | Harris | 4,400 |
| | | Jefferson | 900 |
| | | Liberty | 300 |
| | | Montgomery | 300 |
| | | Orange | 200 |
| | | San Jacinto | < 100 |
| Texas | 8,500 | | |

Temporary housing is based on 1% in CAT 2 and 2% in CAT 3.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Source: US Army Corps of Engineers, All Rights Reserved

**Hurricane Ike Housing Model**

**Generated By:**
Siemsen/Deatrick, LRL 1900 EDT 09/13/2008

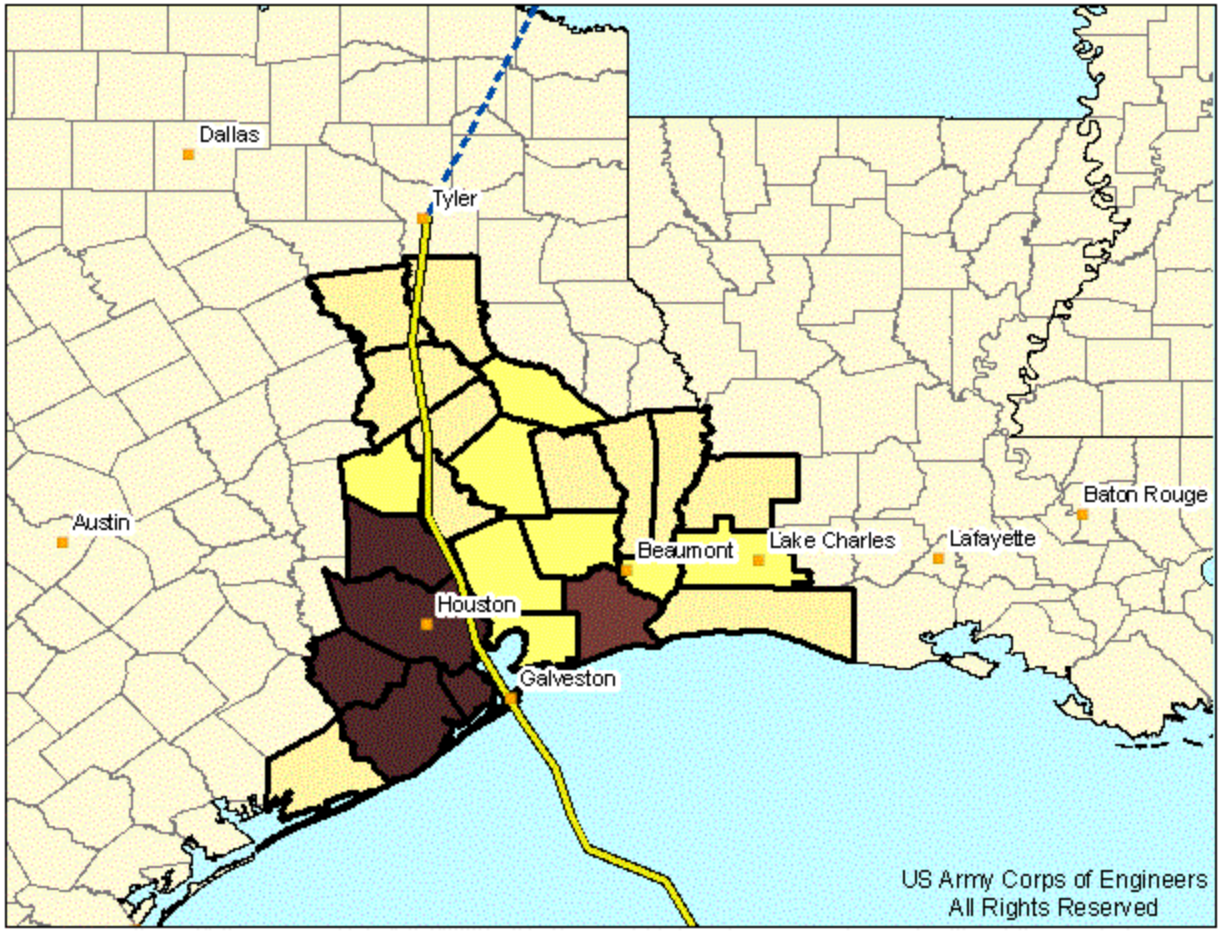
**Sources:**
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

# Hurricane Ike Population Model

## Landfall Plus About 16 Hours

**For Planning Purposes Only!**




### *Post Landfall Results – Resident Population Within Hurricane Force Winds*

Texas - 5,760,000
Louisiana - 84,000

*Model results per County on following page*

This model is based on a Category 3 storm making landfall near Galveston, TX.

Forecast Track
Historic Track

**Population**

- < 25,000 persons
- 25,000 - 99,999 persons
- 100,000 - 174,999 persons
- 175,000 - 249,999 persons
- > 250,000 persons

Information provided on this page displays a Category 3 storm making landfall near Galveston, TX. These projections are based on information from the NHC (1700 EDT 09/13/2008) forecast. The numbers of persons included in this model output are those that would be included within estimated hurricane force winds (Census 2000 values adjusted to July 2007 values).

Details about this model may be obtained at http://www.englinkusace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

| Hurricane Ike Population Model | |
|---|---|
| **Generated By:** Siemsen/Deatrick, LRL 1900 EDT 09/13/2008 | |
| **Sources:** HURREVAC LRL-DEBRIS |  |

US Army Corps of Engineers

# Hurricane Ike Population Model

## Landfall Plus About **16** Hours

**For Planning Purposes Only!**

| State | Population per State | County | Population per County |
|---|---|---|---|
| Louisiana | | Beauregard | 2,000 |
| | | Calcasieu | 77,000 |
| | | Cameron | 5,000 |
| Louisiana | 84,000 | | |
| | | | |
| Texas | | Anderson | 5,000 |
| | | Angelina | 68,000 |
| | | Brazoria | 279,000 |
| | | Chambers | 29,000 |
| | | Cherokee | 18,000 |
| | | Fort Bend | 338,000 |
| | | Galveston | 285,000 |
| | | Hardin | 52,000 |
| | | Harris | 3,721,000 |
| | | Houston | 20,000 |
| | | Jasper | 22,000 |
| | | Jefferson | 243,000 |
| | | Liberty | 76,000 |
| | | Matagorda | < 1,000 |
| | | Montgomery | 356,000 |
| | | Newton | 7,000 |
| | | Orange | 83,000 |
| | | Polk | 47,000 |
| | | San Jacinto | 25,000 |
| | | Trinity | 15,000 |
| | | Tyler | 21,000 |
| | | Walker | 50,000 |
| Texas | 5,760,000 | | |

The number of persons estimated to be within the hurricane force winds comes from Census 2000 values adjusted to July 2007 values.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

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**Hurricane Ike Population Model**

**Generated By:**
Siemsen/Deatrick, LRL 1900 EDT 09/13/2008

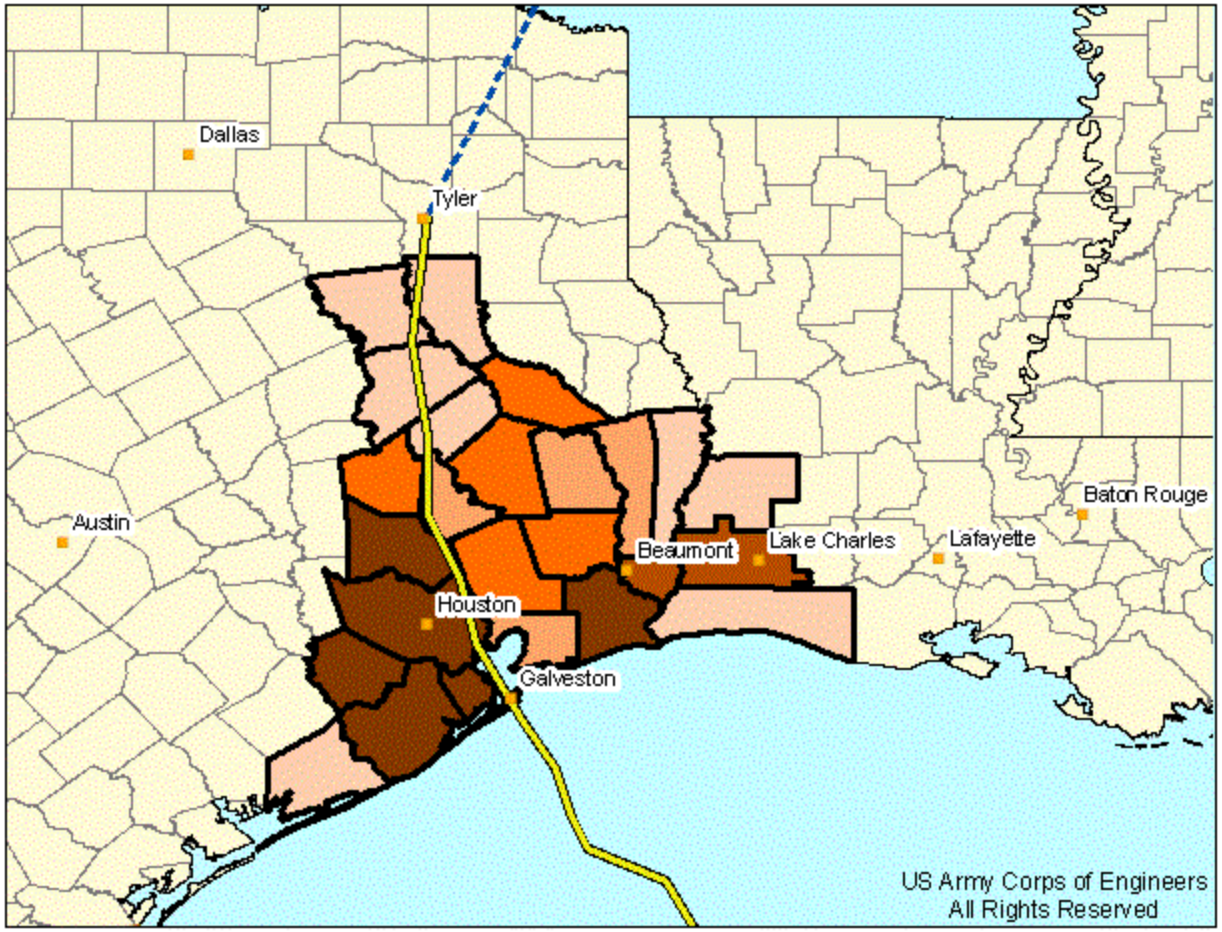
**Sources:**
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

# Hurricane Ike Households Model

## Landfall Plus About **16** Hours

**For Planning Purposes Only!**




### *Post Landfall Results – Resident Households Within Hurricane Force Winds*

Texas - 2,046,000
Louisiana - 31,000

*Model results per County on following page*

This model is based on a Category 3 storm making landfall near Galveston, TX.

Forecast Track
Historic Track

**Households**

- < 7,500 households
- 7,500 - 14,999 households
- 15,000 - 24,999 households
- 25,000 - 49,999 households
- > 50000 households

Information provided on this page displays a Category 3 storm making landfall near Galveston, TX. These projections are based on information from the NHC (1700 EDT 09/13/2008) forecast. The numbers of households included in this model output are those that would be included within estimated hurricane force winds (Census 2000 values adjusted to July 2007 values).

Details about this model may be obtained at http://www.englinkusace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

| Hurricane Ike Households Model | |
|---|---|
| **Generated By:** Siemsen/Deatrick, LRL 1900 EDT 09/13/2008 | |
| **Sources:** HURREVAC LRL-DEBRIS | Page 13 of 14 |

US Army Corps of Engineers

# Hurricane Ike Households Model

## Landfall Plus About 16 Hours

**For Planning Purposes Only!**

| State | Households per State | County | Households per County |
|---|---|---|---|
| Louisiana | | Beauregard | < 1,000 |
| | | Calcasieu | 29,000 |
| | | Cameron | 2,000 |
| Louisiana | 31,000 | | |
| | | | |
| Texas | | Anderson | 2,000 |
| | | Angelina | 24,000 |
| | | Brazoria | 94,000 |
| | | Chambers | 11,000 |
| | | Cherokee | 7,000 |
| | | Fort Bend | 106,000 |
| | | Galveston | 108,000 |
| | | Hardin | 20,000 |
| | | Harris | 1,326,000 |
| | | Houston | 7,000 |
| | | Jasper | 8,000 |
| | | Jefferson | 90,000 |
| | | Liberty | 25,000 |
| | | Matagorda | < 1,000 |
| | | Montgomery | 126,000 |
| | | Newton | 3,000 |
| | | Orange | 31,000 |
| | | Polk | 18,000 |
| | | San Jacinto | 10,000 |
| | | Trinity | 6,000 |
| | | Tyler | 8,000 |
| | | Walker | 16,000 |
| Texas | 2,046,000 | | |

The number of households estimated to be within the hurricane force winds comes from Census 2000 values adjusted to July 2007 values.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

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**Hurricane Ike Households Model**

**Generated By:**
Siemsen/Deatrick, LRL 1900 EDT 09/13/2008

**Sources:**
HURREVAC
LRL-DEBRIS